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**What is claimed is:**

- 1           1.    A fluid injector comprising:  
2                a base including a chamber and a surface;  
3                a first through hole, communicating with the chamber,  
4                disposed in the base;  
5                a bubble generator disposed on the surface near the first  
6                through hole outside the chamber of the base;  
7                a passivation layer disposed on the surface; and  
8                a metal layer, defining a second through hole, disposed  
9                on the passivation layer outside the chamber, wherein the  
10               second through hole communicates with the first through hole.  
1           2.    The fluid injector as claimed in claim 1, wherein  
2                the bubble generator comprises:  
3                a first heater, disposed on the surface outside the  
4                chamber, for generating a first bubble in the chamber; and  
5                a second heater, disposed on the surface outside the  
6                chamber, for generating a second bubble in the chamber to  
7                inject fluid in the chamber, wherein the first heater and the  
8                second heater are located at opposite sides of the first  
9                through hole.  
1           3.    The fluid injector as claimed in claim 1, wherein  
2                the bubble generator includes a heater.  
1           4.    The fluid injector as claimed in claim 1, wherein  
2                the metal layer includes a plurality of fins on a surface away  
3                from the base to assist the metal layer in heat dissipation.  
1           5.    The fluid injector as claimed in claim 1, wherein  
2                the diameter of one end, communicating with the first through  
3                hole, of the second hole is substantially larger than that  
4                of the other end of the second through hole.  
1           6.    The fluid injector as claimed in claim 1, further  
2                comprising:

3 an adhesion layer, disposed between the base and the  
4 metal layer, for assisting in adhesion between the metal layer  
5 and the base.

1 7. The fluid injector as claimed in claim 6, wherein  
2 the adhesion layer is Al.

1 8. The fluid injector as claimed in claim 1, wherein  
2 the metal layer is Ni-Co alloy.

1 9. The fluid injector as claimed in claim 1, wherein  
2 the metal layer is Au.

1 10. The fluid injector as claimed in claim 1, wherein  
2 the metal layer is Au-Co alloy.

1 11. The fluid injector as claimed in claim 1, wherein  
2 the base comprises:

3 a silicon substrate; and

4 a structural layer disposed on the silicon substrate to  
5 form the chamber therebetween.

1 12. The fluid injector as claimed in claim 11, wherein  
2 the structural layer defines a third through hole, and the  
3 passivation layer defines a fourth through hole corresponding  
4 to the third through hole, and the metal layer is directly  
5 connected with the silicon substrate via the fourth through  
6 hole.

1 13. The fluid injector as claimed in claim 11, wherein  
2 the structural layer defines a third through hole, and the  
3 passivation layer defines a fourth through hole corresponding  
4 to the third through hole, and the base further comprises:

5 an adhesion layer, disposed on the structural layer and  
6 located between the passivation layer and the structural  
7 layer, abutting the silicon substrate via the third through  
8 hole and abutting the metal layer via the fourth hole to assist  
9 in adhesion between the metal layer and the silicon substrate.

1        14. The fluid injector as claimed in claim 13, wherein  
2 the adhesion layer is A1.

1        15. A method, for manufacturing a fluid injector,  
2 comprising:

3        providing a wafer;

4        forming a structural layer on the wafer and defining a  
5 chamber between the wafer and the structural layer;

6        disposing a bubble generator on the structural layer,  
7 wherein the bubble generator is located outside the chamber;

8        forming a passivation layer on the structural layer;

9        forming a metal layer on the passivation layer; and

10       forming a first through hole on the structural layer,  
11 wherein the first through hole communicates with the chamber.

1        16. The method as claimed in claim 15, wherein the  
2 bubble generator is covered by the metal layer.

1        17. The method as claimed in claim 15, wherein the metal  
2 layer is coated on the passivation layer by electroforming.

1        18. The method as claimed in claim 15, wherein the metal  
2 layer is coated on the passivation layer by electroless  
3 plating.

1        19. The method as claimed in claim 15, wherein the metal  
2 layer is coated on the passivation layer by physical vapor  
3 deposition.

1        20. The method as claimed in claim 15, wherein the metal  
2 layer is coated on the passivation layer by chemical vapor  
3 deposition.

1        21. The method as claimed in claim 15, wherein the metal  
2 layer includes a plurality of fins on a surface away from the  
3 base to assist the metal layer in heat dissipation.

1        22. The method as claimed in claim 15, further  
2 comprising:

3 forming a second through hole in the metal layer, wherein  
4 the second through hole communicates with the first through  
5 hole.

1 23. The method as claimed in claim 22, wherein the  
2 diameter of one end, communicating with the first through  
3 hole, of the second hole is substantially larger than that  
4 of the other end of the second through hole.

1 24. The method as claimed in claim 15, wherein an  
2 adhesive layer is formed on the structural layer before the  
3 metal layer is formed on the structural layer so as to assist  
4 adhesion between the metal layer and the wafer.

1 25. The method as claimed in claim 15, wherein the  
2 structural layer defines a third through hole, and the  
3 passivation layer defines a fourth through hole corresponding  
4 to the third through hole, and the metal layer is directly  
5 connected with the wafer via the fourth through hole.

1 26. The method as claimed in claim 15, wherein a third  
2 through hole is formed in the structural layer after the  
3 structural layer is formed on the wafer, and an adhesion layer  
4 is formed on the structural layer to be connected with the  
5 wafer via the third through hole.

1 27. The method as claimed in claim 15, wherein the metal  
2 layer is Ni-Co alloy.

1 28. The method as claimed in claim 15, wherein the metal  
2 layer is Au.

1 29. The method as claimed in claim 15, wherein the metal  
2 layer is Au-Co alloy.

1 30. The method as claimed in claim 15, wherein the  
2 structural layer is silicon nitride.

1 31. A fluid injector comprising:

2 a base including a chamber and a surface;

3 a first through hole, communicating with the chamber,  
4 disposed in the base;

5 a bubble generator disposed on the surface near the first  
6 through hole outside the chamber of the base;

7 a passivation layer disposed on the surface; and

8 a metal layer disposed on the passivation layer outside  
9 the chamber to dissipate heat.

1 32. The fluid injector as claimed in claim 31, wherein  
2 the metal layer includes a plurality of fins on a surface away  
3 from the base to assist the metal layer in heat dissipation.

1 33. The fluid injector as claimed in claim 31, further  
2 comprising:

3 an adhesion layer, disposed between the base and the  
4 metal layer, to assist in adhesion between the metal layer  
5 and the base.

1 34. The fluid injector as claimed in claim 33, wherein  
2 the adhesion layer is conductive material.

1 35. The fluid injector as claimed in claim 31, wherein  
2 the metal layer is Ni-Co alloy.

1 36. The fluid injector as claimed in claim 31, wherein  
2 the metal layer is Au.

1 37. The fluid injector as claimed in claim 31, wherein  
2 the metal layer is Au-Co alloy.

1 38. The fluid injector as claimed in claim 31, wherein  
2 the base comprises:

3 a silicon substrate; and

4 a structural layer disposed on the silicon substrate to  
5 form the chamber therebetween.

1 39. The fluid injector as claimed in claim 38, wherein  
2 the structural layer defines a second through hole, and the  
3 passivation layer defines a third through hole corresponding  
4 to the second through hole, and the metal layer is directly

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5 connected with the silicon substrate via the third through  
6 hole.

1 40. The fluid injector as claimed in claim 38, wherein  
2 the structural layer defines a second through hole, and the  
3 passivation layer defines a third through hole corresponding  
4 to the second through hole, and the base further comprises:

5 an adhesion layer, disposed on the structural layer and  
6 located between the passivation layer and the structural  
7 layer, abutting the silicon substrate via the second through  
8 hole and abutting the metal layer via the third hole to assist  
9 in adhesion between the metal layer and the silicon substrate.